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Mr. McCrory recently conferred with F.E. Hardisty at Chicago regarding the work of the LaCrosse, Wis. soil erosion experiment station and with D. L. Yarnell at Iowa City regarding the work under his charge.

N.A. Kessler is in Washington for the purpose of revising the general plans for the soil improvement program of the rural rehabilitation work of F.E.R.A. These plans are to be submitted to the State Extension departments of the various States as a guide in the work of terracing, liming, and other soil improvement work to be carried on during the coming season.

L.A. Jones attended a Soil Erosion and Moisture Conference in Los Angeles about the middle of the month and delivered a paper on erosion and run-off from cultivated areas. He visited the Berkeley Office en route and returned by way of New Mexico and Cape Girardeau, Mo. where he inspected work for the F.E.R.A. and the Bureau.

B.S. Clayton reports very severe peat fires burning in the Everglades. The fire near Davie, Fla., threatened the town, swept along a 7 mile front and burned between 5,000 and 6,000 acres. These peat fires are described as being the worst in a decade. They are usually controlled by flooding or by plowing wide deep furrows around the burning area.

A meeting of regional supervising engineers of the Forest Service stationed at New Orleans, Denver and Milwaukee was held at Guthrie, Okla. during the period March 4 to 16. At this meeting, presided over by W.D. Ellison instructions were prepared covering work done by the E.C.W. erosion control camps of the Forest Service. Regional Supervisors O.C. Word, C.L. Hamilton and C.A. Frye, Oklahoma State Technician, F.E. Blanchert, and Oklahoma State Extension Agricultural Engineer W. H. McPheeters, attended the meeting and assisted in the preparation of instructions.

H.S. Riesbohl with H. G. Lewis of the Bureau of Chemistry and Soils at the Guthrie soil erosion experiment station, conferred with State officials at College Station, Texas, concerning the organization of a Regional Board of Directors consisting of representatives from States having lands in the Red Plains Region. Dr. E.B. Reynolds, Chief of Agronomy Experiments of the Texas Agricultural Experiment Station, and Mr. Daniels Scoates, Head of the Agricultural Engineering Department, were chosen as Texas representatives for this Board.

P.C. McGrew reports that less erosion occurred at the Pullman Erosion Station than for any previous year since the station was established. The rainfall for 1934 at Pullman was 19.58 inches, 1.33 inches below normal.

Work on terraced land was started with the new two way plow at the Tyler erosion station on February 27. R.W. Baird reports that this plow,

which turns all furrows uphill, leaving the dead furrow in the terrace channel, is operating very satisfactorily. By laying out a guide furrow parallel to and above the terrace at a distance sufficient to permit the turning of the tractor between the guide furrow and the terrace, the point furrows are plowed first and no turning on plowed land is necessary.

At the request of Prof. W.G. Crandall of the South Carolina Vocational Teachers, F.O. Bartel conducted a three day course in terracing work at Clemson College, South Carolina on February 19 to 21, inclusive. Fifty five assistant vocational-agricultural teachers were instructed in the use of the farm level, and during the three day period thirteen miles of terraces were located. At night meetings lectures were given relating to the experimental results collected at the Statesville erosion station and on terrace construction and maintenance.

R.R. Drake reports that the worst dust storms of the season, and probably the worst dust storm ever experienced in the western third of Kansas, occurred on February 21 and March 4 and 8. Deficiency in the rainfall for the past two years and the excessively dry winter have greatly reduced the possibility of wheat plants surviving these dust storms, the first two of which were followed by freezing temperatures. Some listing is being done to prevent soil blowing, which apparently will continue on unlisted land until a general rain or snow occurs sufficient to establish satisfactory plant growth.

Experimental results at the Zanesville station for the year 1934, according to V.D. Young, verify results obtained on the Tyler and Bethany stations that soil losses are greater for uniform than for variable-grade terraces. During 1934 a terrace with a variable grade of 1 to 3 inches and 800 feet long lost 2.9 tons of soil per acre as compared with 3.45 tons per acre for a terrace of the same length and a uniform grade of 3 inches per 100 feet, both planted to wheat.

A. T. Holman reports that G.E. Martin held two farm meetings on the Bethany erosion station on March 5 and 6. On March 5 four counties were represented by an attendance of 64 farmers, and on March 6 four other counties were represented by an attendance of 61 farmers.

A slow rain amounting to 0.18 inch accompanied by mild temperature and a slow run-off occurred on the LaCrosse erosion station on March 4. As a result, F.E. Hardisty reports one of the terraces was overtopped due to ice and snow clogging the channel. The frequency of such occurrences is being studied at this station to determine the resulting damage to terraces and the practicability of terracing under such conditions.

In connection with a proposed study of the ground-water resources of Colorado, R.L. Parshall and Carl Rohwer were called upon by State officials to assist in outlining the work, the purpose of which is to determine the location, extent and quantity of ground water and the effect of the pumping draft on the available supply. Mr. Parshall was also called into conference by the U.S. Bureau of Reclamation in regard to the Grand Lake trans-mountain diversion project, in connection with which an economic study will be required as to the use of water in the Poudre, Thompson, St. Vrain and South Platte River valleys. He also conferred with representatives of the Denver Municipal Water Board concerning the Moffat tunnel diversion project, the plan of which is to divert this tunnel water from South Boulder Creek near Eldorado Springs through a canal skirting the east slope of the foothills and delivering the supply to the city of Denver.

An article on "Irrigation Prospects for 1933" (for the vicinity of Medford, Oregon) was prepared by R.A. Work in collaboration with the Superintendent of the Medford and Talent irrigation districts and the County Water Master, for publication in the March issue of the "Pear-O-Scope." The forecast is for a limited water supply which will, however, be sufficient to mature all crops in the irrigation district, if used with care.

Possibilities of sewage irrigation at El Paso, Texas, were investigated by Harry G. Nickle, upon request of the State Health Officer of Texas, and results of his study were set forth in a brief report. The flow of sewage averages about 6,000,000 gallons per day. In his report Mr. Nickle stated that the present flow is suitable for the irrigation of cotton and certain feed crops, and that there is land suitable for irrigation in the vicinity of El Paso. He cited certain precautions and recommendations in case such practice should be undertaken, roughly sketching location and size of nearby vacant areas, and listing other important factors which necessarily would have to be fully considered in a complete study of the problem.

F. C. Scobey has been appointed a member of a board of three consulting engineers to check plans prepared by the American section of the International Boundary Commission having to do with the division of the waters of the Rio Grande.

Yields of cotton plots at the Bard, Calif., experiment station in 1934 were the best the station has ever recorded, according to Dean W. Bloodgood. Climatic and other factors favoring the growth of Pima cotton were ideal. The average yield of 36 plots was 1,774 pounds of seed cotton per acre. Water was measured on 11 of these plots one of which produced the largest yield (2,880 pounds per acre) and also used the largest quantity of water (81.58 acre-inches). The average yield of these 11 plots was 1,562 pounds per acre, and the average amount of water used was 64.25 acre-inches per acre.

J. C. Marr delivered a talk on "Climatic Cycles" before the Ada County (Idaho) Grange.

Study by C.A. Taylor of 1934 data on the effect of varying irrigation intervals on growth rate and ultimate size of citrus fruit showed that zero growth rate for 12 days prior to irrigation was followed by such a rapid swelling of the fruit after irrigation, that the prior loss was entirely made up and there appeared to be no effect on ultimate size. Further study of this subject will be made during the coming season.

W. W. McLaughlin gave a talk on "Measures Taken to Alleviate the Effects of the Drought of 1934", before the Fourth Water Users Conference of the American Farm Bureau Federation held in Los Angeles February 25-27. P.A. Ewing also gave a talk on "Economic Studies of Reclamation Projects," describing a number of economic surveys of various irrigation enterprises made by the Division of Irrigation during the past 7 or 8 years.

According to S.W. McBirney, investigations are being made in California of the problem of cleaning up weedy ridges or beds preparatory to sugar-beet planting. This problem has been encountered in connection with the increasingly popular method of planting beets two rows to the bed. The ridges, which are listed up in the fall and lie through the winter settling and taking moisture, sometimes become very weedy in early spring before they can be worked down for planting, and the usual method of

harrowing is not sufficient to clean them up. A brief trip was made to the Salinas area where this method of planting has been practiced for three or four years to study equipment and methods being used.

E. M. Mervine has completed what appears to be a commercially acceptable crust breaker as an attachment to the beet cultivator. These attachments work on four or more beet rows, puncturing the crust to permit the young seedling to come through without much hazard to the young plant. The breaker units consist of five pronged disks, two of which are loose on the shaft, making the units self-cleaning. It is approximately 11 inches in diameter and 5 inches wide. Its simplicity and effectiveness have created a demand for it in southern Colorado and Nebraska as well as locally.

E.M. Dieffenbach, at Albany, Ga., has recently designed and constructed a low-pressure spray nozzle of a rather unusual type. The special feature of this nozzle is that atmospheric air is admitted into the whorl chamber of the nozzle to assist in breaking up the liquid into spray.

Messrs. Humphries and Brockseker left Washington March 20 to begin the season's field work in connection with fertilizer placement studies on cotton and tobacco. Messrs. Sharp and Redit recently made a trip to Onley, Va., where fertilizer placement studies on potatoes are being conducted. Mr. Redit will leave shortly for Texas and the Southwest for the placement work with cotton in that region.

R. M. Merrill advises that a report on the comparative tests of plow attachments as to their effect on the total draft of plows has been completed by A.H. Graves and Thayer Cleaver. This report covers five series of tests made in 1933 and 1934 near Toledo, Ohio and Urbana, Ill., and includes tests totaling approximately 45,000 feet in length, or equivalent to about 900 fifty-foot individual tests. These tests were made primarily to determine the total draft of different plows when equipped with regular colters and jointers as compared with the total draft when equipped with the self-aligning disc jointers which have been under development for the coverage of cornstalks for the control of the European corn borer. The results of all tests showed an average of 13.6 percent less draft with the self-aligning disc jointers than with regular equipment. This amounts to a saving of approximately 2 horsepower when pulling a two-bottom 14 inch plow 7 inches deep at 3 miles per hour.

Wallace Ashby attended the annual meeting of the South Carolina Home Economics Association at Columbia, S.C. on February 23 and discussed planning and remodeling of farmhouses. He later gave a radio talk on the same subject from the local station.

On March 8 H. Yamamoto, Agronomist in Charge, Government General of Chosen, of Keijo, Chosen, conferred with MA.R. Kelley in regard to grain storages and other farm buildings. Philip Schwart of the North Carolina Emergency Relief Administration also conferred with Mr. Kelley on plans for potato storage.

No publications were issued during the past month.